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ABSTRACT

In comparing research conducted in the Netherlands and the United States on parental reports of child behavior, this document reports several studies in which Dutch parents of children ages 3 to 36 months completed a translated version of Bates' Infant Characteristics Questionnaire (ICQ). In the first part of the Dutch study, 7,000 parents responded to the questionnnaire, which was printed in a Dutch magazine distributed in the Netherlands and Belgium. Results suggested that more attention should be paid to changes in parental judgment related to developmental changes in their children. Test-retest reliability of ICQ factors was also examined in some parents' responses to the ICQ six months later. When the factor analyses of Bates' original sample of Indiana parents and one sample of Dutch parents were compared, striking cross-cultural similarities were found. Another analysis found stable factors across age groups. In other Dutch populations, a relationship was found between perceived "difficultness" of infants and maternal scores on neuroticism, but no relationship was found between ICQ scores and children's language development at 3 to 4 years. (CB)

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Bates' Infant Characteristics Questionnaire (ICQ) in the Netherlands

Geldolph A. Kohnstamm

paper prepared for the fourth biennial international conference on infant studies

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I. Introduction

John Bates has created considerable controversy in the field of temperamental assessment by stressing the subjective component in a parental report on the childs behavior.
He developed his ICQ and MPQ questionnaires with the explicit purpose of measuring more of this subjective component instead of trying to eliminate it as most other authors did before.

By including the last question in the ICQ "Please rate the overall degree of difficulty your baby would present for the average mother" in his factor-analyses, the answers on this question got a chance to "empirically define" what a large group of mothers understood by "difficult". Instead of defining "a difficult temperament" deductively from clinical experience, like Thomas and Chess, Carey and others did, by naming a certain temperamental constellation "difficult", "easy" and "slow-to-warm-up", Bates inductively used the answers on a question for general difficulty as an indicator for a behavior pattern which emerged from factor-analysis, using the answers to individual items in his ICQ. Thus he came out with a first factor called "fussy-difficult-demanding" or simply "difficult" (for infants and toddlers) and claimed that in so doing he "let the parents define" what they saw as a difficult or easy child.

The controversy which Bates stirred with his 1980 article in the Merrill Palmer Quarterly "The concept of difficult temperament" temporariiy ended with his reply to Thomas,Chess and Korn in the Merrill Palmer Quarterly of January 1983.
Here is the summary of that short article:

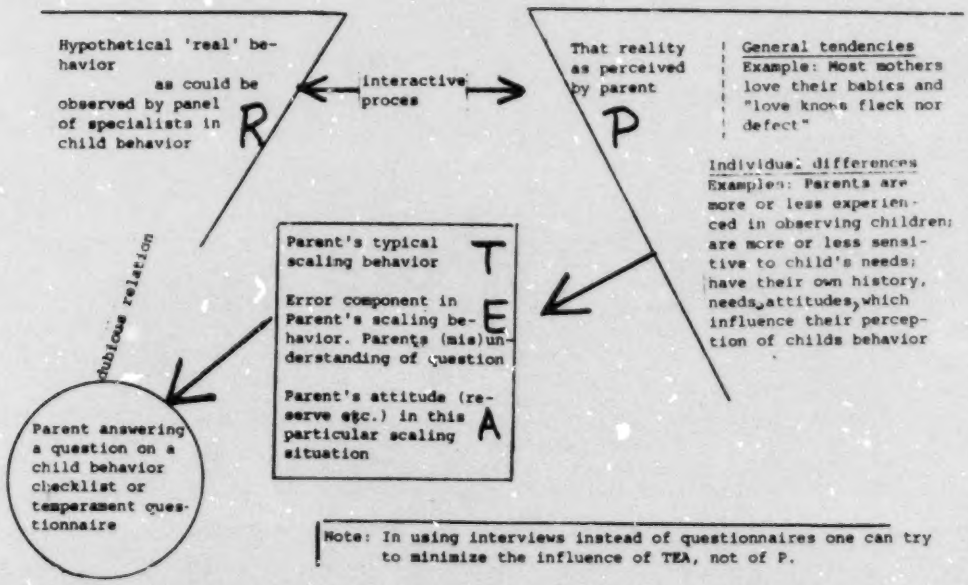
There is controversy regarding the socially-relevant concept of difficult temperament, as shown in recent commentaries by Kagan, by Plomin, and by Rothbart in the January 1982 issue of the *Merrill-Palmer Quarterly*. But it remains worthwhile to question the concept that parent reports of difficult temperament reflect only characteristics within the child plus random error. Research has shown convincingly that there are some modest convergences between parent reports and more objective criteria. However, on the basis of the limited validation and current thinking in personality and social psychology, it is worthwhile also to search for subjective factors in parent perceptions of child characteristics. Such factors may have important effects on the parent-child relationship, and thus social development. Since difficult temperament is measured only by parent reports, the consideration of difficult temperament as a social perception, rather than as a purely within-the-child characteristic, will provide advantages in data interpretation. This perspective does not preclude an interest in the child's constitutional contributions to socialization.

In our view Bates is demanding attention for the P-component in the scheme below, whereas others thusfar have hoped to eliminate it. In developmental, social and clinical psychology more and more attention is directed at the important influence on behavior and self-concept by the way a person is perceived by significant others. For a child such others are mainly his parents and teachers.

From his clinical orientation on the development of the problem child in a family, Bates more or less used current temperamental assessment procedures for measuring in a standardized and simple way the parental view on the child as a (subjective) factor of considerable importance in the development of "difficult" behavior patterns.

Having worked before with both the Thomas and Chess temperamental interviews (and questionnaires) and the Carey scales we felt attracted to Bates' strategy in searching for the child being rated as relatively "difficult" by the parents themselves.*

We decided tot start using his ICQ on a large sample of parents not selected for having problems with their children, in order to see how its questions would be answered by a norm-group. After that such a norm-group could then possibly be used as background for developing a simple instrument to screen for "difficult" infants and toddlers (R + P). Also, we hoped this instrument to be useful as a tool in research.


Hypothetical 'real' behavior as could be observed by panel of specialists in child behavior
R
interactive proces
That reality as perceived by parent
P
General tendencies
Example: Most mothers love their babies and "love knows fleck nor defect"
Individual differences
Examples: Parents are more or less experienced in observing children; are more or less sensitive to child's needs; have their own history, needs, attitudes, which influence their perception of childs behavior
dubious relation
Parent's typical scaling behavior
T
Error component in Parent's scaling behavior. Parents (mis)understanding of question
E
Parent's attitude (reserve etc.) in this particular scaling situation
A
Parent answering a question on a child behavior checklist or temperament questionnaire
Note: In using interviews instead of questionnaires one can try to minimize the influence of TEA, not of P.

* See also text with graph representing means on item 3 in the appendices, p. 24

II. Method

In May 1982 a translation of BATES' ICQ was included in a Dutch magazine for parents with a circulation of about 160.000.
Over 7.000 questionnaires were returned to the editorial office.

95 % of the questionnaires were filled in by mothers, 65 % of which were primiparous.
The sample consisted of 4.591 only children, 551 first born with younger siblings, 1.375 second born, 410 third born and 73 later born; all were between 3 and 36 months.
About 10 % of the families live in the Dutch speaking part of Belgium.
For practical reasons and to make comparisons with Bates' data easier, the Dutch-Belgian group was split up in 9 age-groups, at unequal intervals.
One item was added in the Dutch version of the ICQ: 33, asking directly for the overall degree of difficulty the child presents for his/her parents.
This item was numbered 33, since Bates' ICQ has 32 items.

There are important differences between the two sets of ICQ-data here compared. The Bates' sample consists of a large group at 5 - 6 months of age and two smaller ones at 13 and 24 months. The last two are subsamples from the first, followed longitudinally.
All of these respondents come from a midwestern American town of about 50.000 and its suburban and rural environments. They were found by using birth-announcements in the newspapers and a $ 3,- award for every parent sending back the questionnaire.
The Dutch group comes from places all over Holland and the Dutch speaking part of Belgium. It consists of readers of a magazine for parents and was also basically self-selected. A promise of 100 Dutch guilders (about 35 US dollars) for every 100th respondent probably helped the response to be so good.

In this paper we report part of the results thus far obtained and analyzed.

We are grateful to our students Janke van Bekkum, Lenny Duijvelaar, Lidewij Elsen, Hanneke Kastelein, Sylvia Meenhuis and Henk Vermeulen for their participation in this project.

III. Developmental changes in average parental judgment

In the graphs presented in the appendices the changes of mean answers for children of different age-groups are illustrated. This is done for a selection of interesting items, as well as for a cluster of items representative for a factor called "difficult".

Here, we will not elaborate on these graphs, however interesting, but only summarize the main trends.

Main trends

- Most mothers rate babies as easier and "better" than average. For somewhat older children the midpoint and difficult end of the scale is used more often. This is true for many questions. The rosy opinion most mothers give on their babies (easier, more active etc. than the average baby) reminds one of the way love influences perception. "Love knows fleck nor defect" says an old Dutch proverb (de liefde kent vlek noch gebrek). Or, as Jack Bates illustrated this with a related American proverb: "A face only a mother could love".
  The gradual move to the neutral midpoint of the evaluative dimensions which most items represent could then be interpreted as a process of disenchantment or growing reality-perception, partly based on more frequent comparisons with behavior of other children.
- There are striking cross-cultural similarities between Indiana-parents and parents in Holland and Belgium. These similarities impress more than the differences obtained with some questions.
- As to the questions (32 and 33) asking for general difficultness for parents there is a gradual growth with growing age in the proportion of children being rated on the difficult side of the scale. It begins with only 5 % for babies but rises up to 15 % or 20 % for 3-year olds.
- Between 3 and 19 months children on the average are gradually rated as less easy.
- Initially 2nd and 3rd born children are being rated as easiest. Between 9 and 15 months however they "overtake" the first-borns, in being rated - on the average - as less easy to deal with.

- The same picture emerges for a composite score of seven items (including the general question described here) based on first factor in factor analysis. Factor was named crying - easy/difficult.
- This birth-order effect may be explained by:
  1. Later-born infants require more attention when starting to move around.
  2. Mother has to divide her attention between older child and younger one and thus rates her second (or third) child as more demanding.
- When babies grow to be infants and infants grow to be toddlers important changes in <u>average</u> parental ratings take place, which only become visible when large groups of parents are being questionned.

<u>Main conclusion</u>

In research using parental ratings of temperament more attention should be paid to age-related developmental changes in average parental judgment. It is only against the background of such normal changes that individual changes can be interpreted in an adequate way.

IV. Reliability

A randomly selected group of parents received a second ICQ-questionnaire by mail with a letter in which we asked their cooperation for a reliability study. Over 80 % responded by sending their second ICQ which was received between 4 and 12 weeks after we obtained their first one.
Since the ICQ has two slightly different versions for babies up to 6 months and for older children we give the reliability data for 3 separate age-groups.

Table 1

Test - retest reliability of Dutch version of ICQ

Months / Factors	3 - 6	7 - 14	15 - 36
Crying-Easy/Difficult	.59 (n = 48)	.71 (n= 143)	.79 (n = 119)
Persistence	--	.53 (n = 44)*	.84 (n = 47)*
Adaptability	.70 (n = 45)	.75 (n = 129)	.78 (n = 113)
Cuddly	.65 (n = 50)	.60 (n = 138)	.79 (n = 103)

For the original 6 months ICQ Bates (Bates, Freeland and Lounsbury, 1979) obtained test-retest reliabilities for four factors (n= 112).

Fussy-Difficult	.70
Unadaptable	.54
Dull	.57
Unpredictable	.47

* Due to a printing error one of the three items of this cluster, 28, was missed by many of the parents.

A different way of expressing test-retest reliability is the following: For each item one can compute the percentage of mothers giving the second time the same score as the first time. This ranges from 34 % for the least reliable item to 73 % for the most reliable one. The average on all items is just over 50 %.
In the same style one can give the percentages of parents giving the same score or one scale point difference (on a 7-point scale): the item-range is between 67 and 96; the average is just over 80 %.

Rather important to us seems to be the fact that we found a non-linear relation between mother-education and reliability.

Within the group of mothers with children above 7 months we obtained the following test-retest correlations:

Table 2 Reliability and education

	Education		
	Lower	Middle	Higher
Composites			
Crying/Easy Diff.	.65 (n=95)	.85 (n=65)	.80 (n=96)
Persistence	.55 (n=26)*	.80 (n=29)	.83 (n=35)*
Adaptability	.72 (n=92)	.78 (n=62)	.78 (n=82)
Cuddly	.73 (n=91)	.80 (n=60)	.73 (n=84)

For the group with lower education the reliability is rather low. In another Dutch study however, done with parents of a lower-class neighbourhood in Vlaardingen (research done by our student Henk Vermeulen) with 3-year old children better reliability coefficients were obtained for lower educated mothers.

Factor	r	N
Persistent in attention seeking	.79	32
Adaptability	.80	32
Irregularity	.72	30
Cuddly	.73	33
Irritability and quickly upset	.74	33
Cluster of items best predicting last question (12,21,22,28,32)	.81	31

Table 3

Internal consistency of Dutch version of Bates' ICQ

(standardized item α coefficients)

Months	Composites			
	Crying Easy/Diff. 7 items	Persistence 3 items	Adaptability 4 items	Cuddly 2 items
2 - 4	.75 (n = 494)	-	.70 (n = 521)	.53 (n = 516)
5 - 6	.80 (n = 644)	-	.70 (n = 670)	.48 (n = 670)
7 - 11	.81 (n = 2057)	.64 (n = 741)*	.70 (n = 2065)	.50 (n = 2080)
12 - 14	.80 (n = 889)	.71 (n = 831)*	.73 (n = 902)	.62 (n = 907)
15 - 18	.79 (n = 928)	.80 (n = 469)*	.72 (n = 932)	.72 (n = 939)
19 - 22	.76 (n = 696)	.78 (n = 336)*	.79 (n = 706)	.69 (n = 710)
23 - 25	.78 (n = 378)	.79 (n = 349)*	.70 (n = 384)	.71 (n = 384)
26 - 30	.76 (n = 543)	.82 (n = 269)*	.73 (n = 547)	.72 (n = 548)
31 - 36	.81 (n = 144)	.72 (n = 68)*	.80 (n = 145)	.68 (n = 148)

* Due to a printing error one of the items in this cluster, 28, was missed by many of the parents.

For the original 6-months ICQ Bates (Bates a.o., 1979) gave internal consistencies (α coefficients) for four factors:

	Fussy-Difficult 6 items	Unadaptable 4 items	Dull 3 items	Unpredictable 3 items
(n= 196)	.79	.75	.39	.50

V. Cross-cultural comparison of factor-analyses

Bates (Bates, 1979) published a four factor-analysis on the ICQ-ratings for a group of 345 to 365 5 - 6 months old children.
We set out for a cross-cultural comparison of factor-structure. Here we report part of the results.
On our request a reanalysis was done for Bates' 5 - 6 months data with more subjects and a five factor solution. The result is to be found in the appendix to this paper.

1. The first factor for the Bloomington Ind.-data is named (by us) crying - easy/difficult. It had as items (non-discriminating items between parentheses):

   1, (4), (5), 6 12, (13), (14), 21[x] 32[xx]

   Compare this with the discriminating items of our own first factor at 5 - 6 months of age:

   5, 6, (12), 13, 14, 21, 23, 24, (32), 33[xxx]

   There is a reasonable agreement, in particular when the non-discriminating items are included.

   We have checked for possible differences due to our addition of item 33 asking the parents directly to rate their child's overall difficulty for themselves, whereas in item 32 parents are asked indirectly to do so by rating the "overall degree of difficulty your baby (child) would present for the average mother", which was translated by us into other parents, thus creating a clear difference in meaning between both items. The factor-structure remained the same however for analyses with or without item 33. Both items vary together and are always correlated (between .46 and .66 at different age-levels).

2. The second factor for the Bloomington-data, Attention demanding is not found as a separate factor in the Dutch data; the items are spread over Dutch factors I and V.

3. The third factor for the Bloomington-data, Adaptability is exactly replicated in the Dutch data.
   It is important to note that Bates found the same factor at the ages of 13 months and 24 months. In the Dutch samples it is also the factor with an astonishing stable structure over the age-range studied.
   The factor is (in our data) somewhat correlated with the first factor (see appendix).

---

x Originally numbered 22 in Bates ICQ for 6 months.

xx Originally numbered 24 in Bates ICQ for 6 months.

xxx Item not included in Bates ICQ.

4. The fourth factor for Bloomington, Mood is closely related to the Dutch factor IV, but includes only three discriminating items.

5. The same is true for the only two items of factor IV, Predictable, which is also a separate factor (V) in the Dutch data.

For the 5 - 6 months cross-cultrual comparison there is sufficient concurrence, though there are also differences.

Comparisons between Bates' ICQ factors for 13 and 24 months with our own data do not show new elements. The factor Bates named Persistent and Unstoppable at 13 months (items 28, 29 and 30) and 24 months (26, 28, 29) was found in all Dutch age-groups from 7 - 11 onwards, binding the items 23, 28 and 29.

The only factor we found with consistent regularity over all age-groups which did not appear as a separate factor in Bates' analysis, though its two items form part of his factor Unstoppable and non-cuddly at 24 months, is a clear and separate characteristic in itself, binding the items 19 and 26. It was named Cuddly.

One can be reasonably satisfied about the cross-cultural comparability between the factors which seem to underly the ICQ in its two language-versions, given the fact that the mothers and children in the two studies live on two different continents.

VI. Factor-analysis on the Dutch/Belgian data for different age-groups

In the appendices to this paper one finds the factor-solution for babies 5 - 6 months of age. Data for other age-groups will be sent upon request.

For the first year (until 14 months) a first factor emerged named Crying - Easy/Difficult. It binds the ICQ-items

5, 6, 13, 21, 24, 32

plus the only item we added to the ICQ asking for "general difficulty the child presents for yourself" , 33.

So the general difficultness ratings (items 32 and 33) are, during the first year, mainly connected with crying and fussiness (5, 6, 13), changeability of mood (21) and keeping peaceful when being left alone (24). In the second half year Bates' item 31 (attention demanding) also plays a role in this factor.

But then, rather suddenly it seems, this first factor dissolves. The nucleus, crying, irritability and changeability of mood, most clearly the items

5, 6, 13, 21

remain a first factor during the second year and a second factor during the first half of the third year, but the connection with the items

24, 32, 33

disappears. General difficultness as experienced by mother herself or other adults is no longer mainly associated with crying, fussiness and changeability of mood.

(This factor now also includes Bates' item

1, how easy to soothe when upset.)

It is only in our eldest age-group[1], 31 - 37 months, that we see a return of the general difficulty question 33 in a first factor which is then a combination of persistence, changeability of mood, crying and irritability.

Soon, we will try to substain this result with an analysis of the written answers which about 400 mothers of 2 - 4-year old children gave us on being asked what they themselves understood by "a difficult child".

---

1) But, our sample size at that age was rather small: 61.

It seems self-evident however that though crying and fussing remain important contributors to difficulty as experienced during the second and third year, other kinds of behavior become more salient here, such as being unstoppable, attention demanding and persistent in "bad" behavior. Until the child is one year of age its persistence in trying things out in general creates no real problem for the mother since she can still control his (her) whereabouts and thus the effects of this persistence. But after the child can independently move around and gets strong enough to climb on things his (her) persistence creates a real problem and thus becomes gradually associated more with overall difficulty for parents or other care-takers.

In a totally different sample of 84 three-year old children from a lower-class area in the city of Vlaardingen[1] a multiple regression analysis was done to predict the answers on the general difficulty question 33. For this particular group the best predictor was the persistence-item 28 (plays with forbidden thing). Other significantly contributing predictors were questions pertaining to changeability of mood (21), easily distressed (12) and attention-required other than for care-giving (23).

A more primitive way of looking at the components of general difficultness (item 33) is given in table 4 with an overview of all correlations with ICQ-items stronger than .30.

It is clear from this table that apart from item 32 (general difficultness for others) which is self-evident, crying and fussing (5 and 6) how easy to soothe (1), how easily upset (12), mood in general (17), changeability of mood (21) remain correlated with the general difficulty rating througout the age-range.

At the same time however one can see how attention required (23), play by itself when alone (24), easy to take to places (27) and persistence in attention seeking (31) keep a stable relationship with general difficulty.

Finally it is important to note that only half of the 33 ICQ-items cluster in factors which appear with consistency over a 2½ year age-range. Many of the items, which from a temperamental view on personality (or from sheer common sense) should vary together, simply do not. In this respect the Dutch ICQ-questionnaire seems to be in need of improvement. On the other hand, there are age-specific factors which make sense, such as predictability (items 2 and 3 during the first year with a mysterious reappearance at 31 - 36 months)

1) Research done by one of our students, Henk Vermeulen.

and mood (items 16 and 17 at age 5 - 6 months, 12 - 24 months and 26 - 30 months). Also many of the free-floating items at particular age-levels appear in the above described factors, though not with consistency over longer age-ranges.

Exerpt from a letter by Bates:

The question of whether to use the same items to define difficultness at different ages is hard to answer. I have in the past chosen to let the factor structure at a given age determine the definition. I am quite comfortable with constructs which change to reflect developmental changes, as long as they are conceptually and empirically related, as they are in the case of our 3 different difficultness factors. Recall that the correlation between 6-month and 24-month factors is nearly as great as is the test-retest correlation between the same factor at 5 and 6 months. However, I can see an advantage to defining the composite in a standard way across ages, too. This might be conceptually more convenient, and would probably be supported by cross-age stabilities if you were doing a longitudinal study. Another empirical support for using a single definition might come from confirmatory factor analysis. You could see the extent to which a factor solution at one age fits the data at a different age.

VII. Relation between perceived difficultness and neuroticism

We start quoting Bates (1980):

> There may in fact be some measurable aspects of individual differences in how mothers perceive an infant's difficultness. Several studies have found modest-sized, but significant correlations between self-reported mother personality and temperament difficultness scores. Bates et al. (1979), for example, found that less extroverted mothers tended to see their infants as more difficult than more extroverted mothers did. Sameroff (Note 10) found mother self-reported anxiety, measured prenatally, to correlate with perceptions of infant temperament (except among a sample of black mothers). Likewise, Vaughn, Deinard, and Egeland (in press) found several prenatally-measured mother variables, e.g. anxiety, to relate to temperament. Lounsbury (1978) found that background and personality influenced how mothers responded to the tape-recorded cries of unrelated infants. For example, more empathic and more experienced mothers were less irritated by the cries. It is quite reasonable to expect that personality would be related to how one perceives an infant. However, since the correlations have generally been of a small order in these studies, the specific relationships should be regarded with caution until replicated. They should be seen as indicating a possible new direction for research on parent perceptions.

Method*

After 6 months the Dutch version of Bates' ICQ was again sent to 800 of the original 7000 parents.

± 400 who had originally answered with 1 or 2 on the general question of perceived difficultness

± 400 who had originally answered with either 5, 6 or 7.

The last group being the total group of parents reacting with a 5, 6 or 7 to this question.

761 of these second questionnaires were received at our Institute, together with a personality questionnaire for the mothers.

We wanted to compare the self-rated personality-factors for those mothers <u>who remained stable</u> in their answer to this general question.

---

* This research was done by our students Janke van Bekkum and Hanneke Kastelein.

- 206 mothers who originally answered with 5, 6 or 7 now answered with either 5, 6 or 7.

- 247 mothers who originally answered with 1 or 2 now answered with either 1 or 2.

The two groups did not differ significantly in:

- sex, age and birth-order rank of child,
- age and educational level of mother,
- family size.

The Netherlands Personality Questionnaire NVP for adults was originally derived from the California Psychological Inventory (Gough, 1964) but has been altered considerably in a 5-year scale-construction process. The authors are Luteijn, Starren and van Dijk (1975). The NVP is now considered among the best personality questionnaires available in the Netherlands.

The scale consists of 132 self-statements to be answered with correct, incorrect or ?

Examples: Life is very often difficult for me.
I like to work fast.
I only trust people when I know them well.

No questions regarding children or parenthood are included.
The 132 items have been repeatedly factor-analysed into 7 factors.

Each person receives a score on each factor, based on a summation of non-weighted items. These factor-scores can be categorized in five classes using appropriate reference groups. For testing the differences between groups t-tests on the means of the factor-scores were used as well as chi-square on the frequencies in the categories.

Results

The two groups of mothers, Difficult and Easy, did not significantly differ - on either measure - on the factors: Rigidity, Dominance and Egoism. Means and standarddeviations on these factors were nearly identical.

The groups differed slightly (significant on only one of three measures of difference) on the factor Social anxiety.

They differed clearly on the factors Neuroticism, Selfesteem and Hostility.

In earlier research done by the authors of this scale a second-order factor-analysis revealed a first factor which contained these three (1st order) factors + social anxiety. The general name they gave to this first (2nd order) factor was neuroticism.
Stepwise regression analysis on our own data revealed that the differences on the first (1st order) factor neuroticism explained the largest part of the differences found in the other factors. For this reason only the results on the first (1st order) factor 'neuroticism' are reported here.

The subscale neuroticism consists of 21 questions. An answer "correct" gets two points, a ? gets one point and an "incorrect" zero points.

Examples of questions:

I often do things which I later deplore

I often feel depressed

I am quickly tired

When I don't feel well I am easily irritated.

Answering all questions with correct gives the maximum score of 42 points.

Questions refer to vague somatic complaints, depressed feelings, vague fears and feelings of incompetence.

The authors give as a general description of a high scoring person: feels tense and depressed.

Several reference groups are available for comparing results obtained with this scale. The author advised us to use the reference group consisting of patients from several general practioner's practices (reference group 9). In table 5 the means and standard-deviations for this reference group and our own groups are compared.

	reference group	total group of stable and instable rating mothers	child rated twice by mother as : difficult	easy	
N	(375)	(761)	(206)	(247)	
mean	13.7	13.6	16.8	10.7	t=8.06
sd	9.5	8.2	9.2	6.7	(p=0.000)

table 5 Means and standarddeviations on factor neuroticism of NPV

A contingency table using a breakdown in neuroticism scores as prescribed by the authors of the scale is presented in table 6.

		Child rated twice by mothers as Difficult (n=206)	Easy (n=247)
Mother's self-report on factor 'neuroticism' in Personality Questionnaire	low	8 % (16)	27 % (68)
	average	62 % (128)	66 % (162)
	high	19 % (39)	6 % (14)
	very high	11 % (23)	1 % (3)

table 6 Relationship between rating one's child as "difficult" or "easy" and score on factor 'neuroticism' in personality questionnaire, in percentages (exact numbers between parentheses)

Discussion

There clearly is a correlation between twice - with a six months interval - giving an extreme answer in the question: "Please rate the overall degree of difficulty your child presents for yourself" and the way a mother describes herself on the general neuroticism factor of the NPV. But:

- For the largest parts of both groups (62 and 65%) average scores on neuroticism are obtained.
  Within those largest parts there exists no important relationship between perceived child-difficulty and neuroticism.
- For small percentages (7 - 8%) the relationship is reversed. Stable (perceived) child difficultness goes with low (self-rated) neuroticism and vice versa.

These 'buts' do not deny the fact that for about 30% of the mothers in our subgroup of twice rating their children as more difficult than average the two "negative" perceptions go together.

In the group of mothers with a stable easy perception of their children 27% had a low score on the neuroticism scale.
It may be that this group includes not only those who are really very happy, strong and easy-going but also those who may not or can not admit any negative self-evaluation and consequently give a too rosy picture of themselves. However, the fact that the respondents were never forced to answer our requests for self-evaluation makes it dubious that such cases have been numerous and can 'explain' the observed relationship on the easy side of both scales.

Pondering over our results one should not forget that the observed relationship could only become visible by using the opposition of two extremes: all those mothers out of 7000 with a stable "difficult" perception (a small minority of about 3%) versus an equally small sample of those with an easy perception. Had the personality questionnaire been sent to all those with instable diff.-easy judgments on their children and to those with stable or unstable average ratings, probably no clear relation between neuroticism score and child-rating would have emerged. It is only by concentrating on extremes that such relations become visible.
A thus established correlation cannot be generalized to our population of 7000 but only to the populations of mothers with stable "easy" or "difficult" ratings on questions like the one used in this project.

As to the question of what causes what there is some reason to believe that a high score on neuroticism is not caused by having to care for a difficult child. Remember that none of the neuroticism items had to do with children or parenting. It seems more plausible to think of the stable difficultness perception as being (partly) a reflection of a general state of tension and depression.
Plausible as this may be however, a correlational design as ours can not give an answer to the question of causality.

VIII. Relation with Behaviour Screening Questionnaire and Language Development at 3 - 4 years simultaneously measured

The ICQ question asking for overall difficulty (33) was also included in interviews with 100 mothers of 3 - 4 year old children in Rotterdam and surroundings. This group served as a control-group for another study.

The distribution of answers over the seven-point scale was

very easy		just the ordinary problems			very difficult		
1	2	3	4	5	6	7	
12	8	9	54	9	6	2	%
					(n = 100)		

Compare this with the distribution of answers in the post-mailed questionnaire for the eldest age-group (30 - 37 months):

16	12	7	43	10	6	5	%
					(n = 149)		

The differences are insignificant.

The interview also included the Behaviour Screening Questionnaire (BSQ) by Richman and Graham (1971). The BSQ-items refer to: eating, encopresis, sleeping, activity, concentration, relationship, dependency, ease of management, temper tantrums, mood, worries and fears.

In this control-group a BSQ mean score of 5.3 was found with a standarddeviation of 3.6 and a range of 0-15.

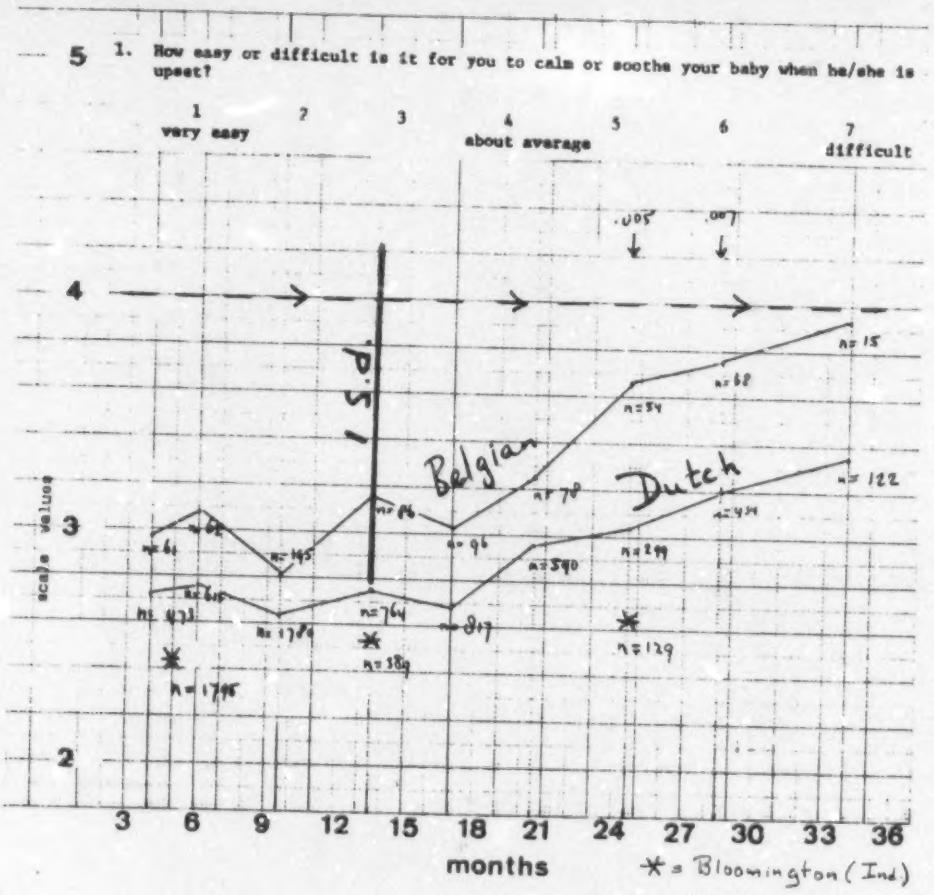
The correlation with question 33 of our ICQ was .54. The only separate BSQ-item with a significant correlation (.53) was - not surprisingly - the one in which all statements about problems of management throughout the interview are to be summarized by the interviewer into one score on a 3-point scale.

Language development

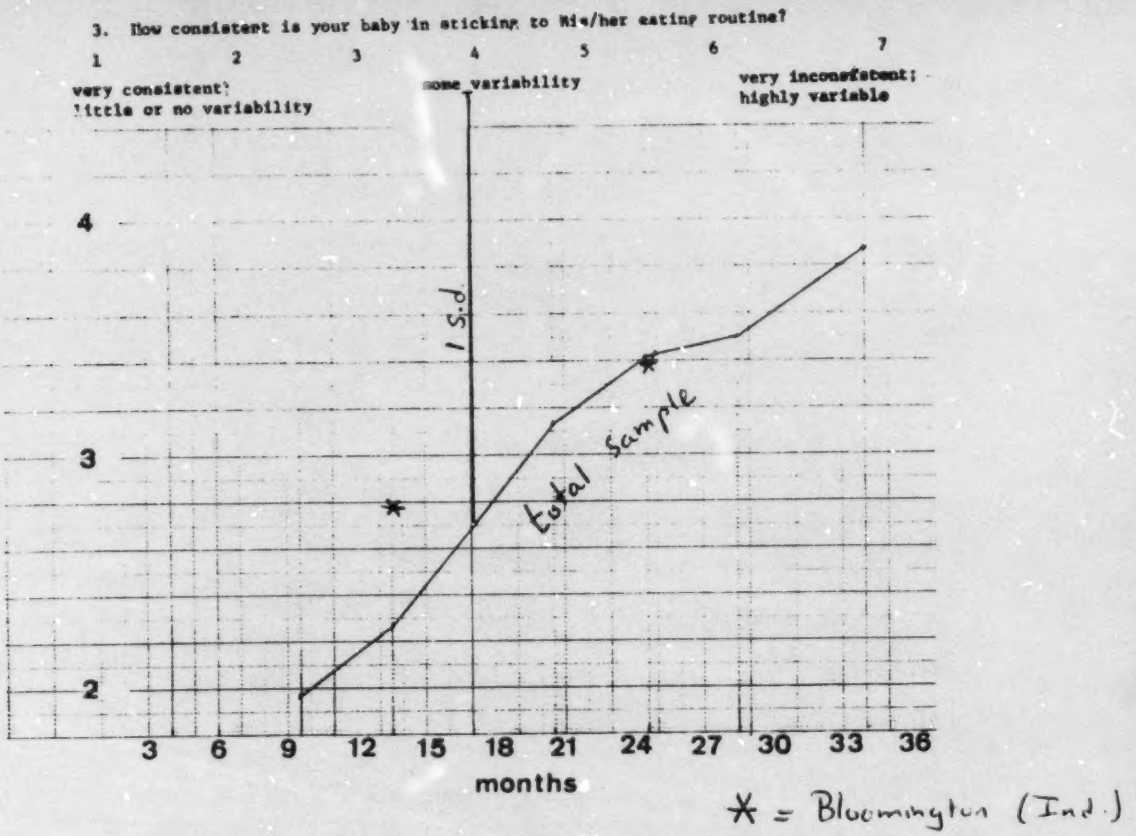
In one of our studies in Vlaardingen with a group at 84 parents and children of lower educational background no correlation whatsoever could be found between a good measure of language development (assessed by means of standardized tests and validated against Kindergarten-teacher judgment) and any of three different measures of ICQ-difficultness, based on parents' ratings. Nor did we find significant correlations between any other ICQ-factor and language test scores.

In another study, using the same group of mothers as described on p. 15 - 20, we asked the mothers if they were worried or had ever been worried before about the language proficiency of their toddlers.
No relation was found between degree of perceived difficultness and worries about language development.

Again in another study, in the city of Gouda, using a group of 58 children and mothers in a longitudinal design, assessments of language proficiency at 24 and 36 months using several methods, among which the Maternal Perception Questionnaire (MPQ) by Bates gave only low correlations between language proficiency and perceived difficultness.
All in all we do find no or very low correlations between language proficiency and perceived difficultness measured concurrently. This fact does not exclude the possibility - as data by Bates and co-workers suggest - of a predictive relationship between mother perceived difficultness at ages 6 and 13 months and language development at 24 and 36 months.

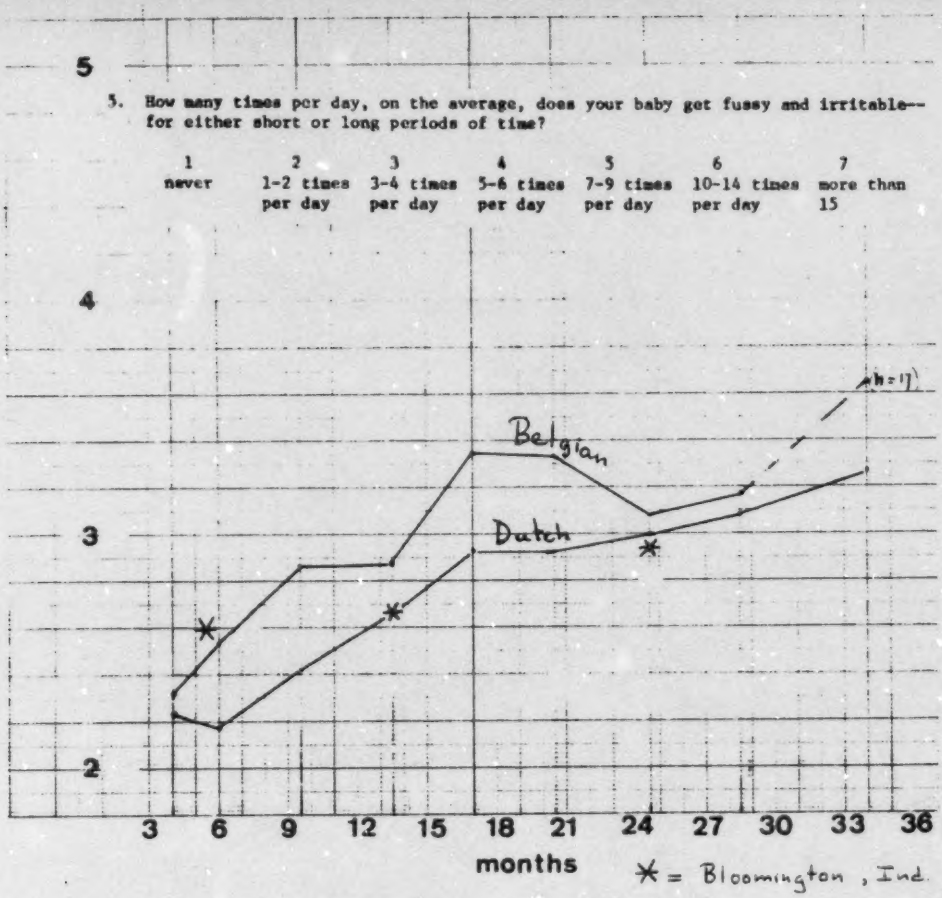


1. Mean scale values chosen by parents in Holland, Belgium and Bloomington, Ind. (*). Probabilities for differences between means given for age group 23 - 25 months and 26 - 30 months.
If the average mother would rate her child as "about average" (4) then all means would be on horizontal dotted and arrowed line. Evidently the average mother in all samples rates her baby and infant as easier than "average", though with growing age the average tendency is away from the easy side of the scale. The Belgian mothers come closest to an average on the midpoint of the scale, in particular for two-year olds.
Differences between Dutch and Belgian means are significant for two of the age-groups studied. Differences between Belgian and Indiana means (*) are significant for the three ages compared.
The concentration on the means in these graphs should not disguise the fact of large differences between individual ratings; the vertical line shows one of the standard-deviations.

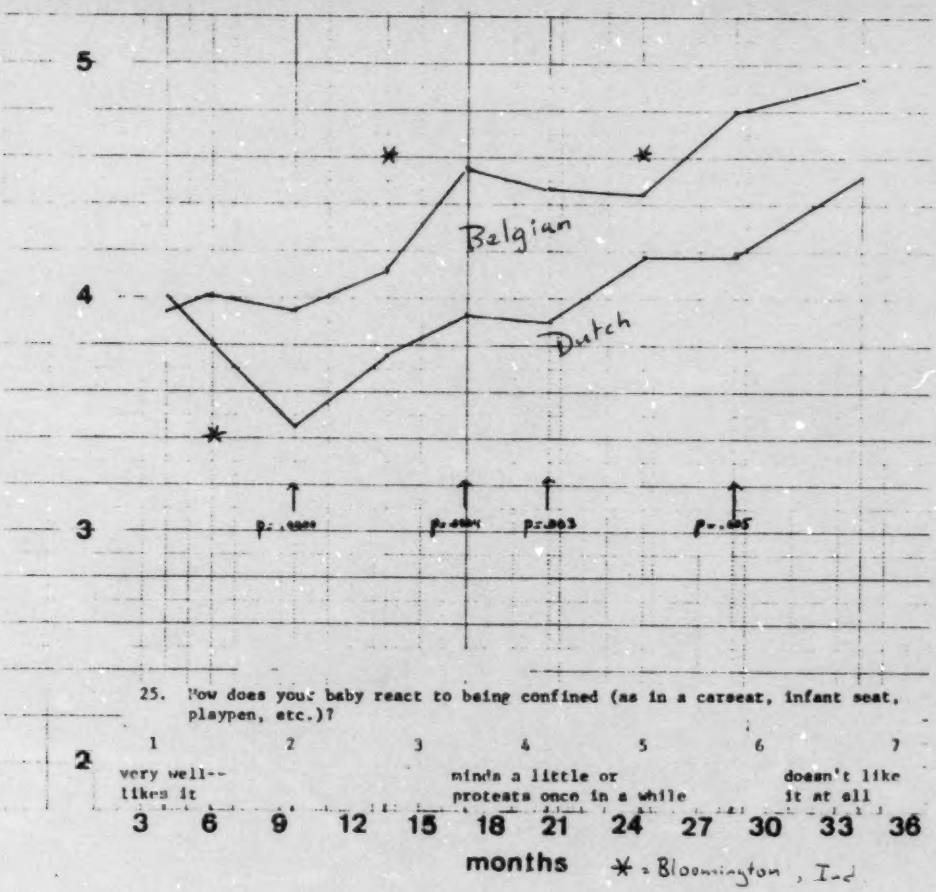


3. Nor does this average developmental tendency away from the "rosy" end of the scale be limited to questions empirically related with general difficultness. This question, showing the tendency very clearly is evidently measuring regularity in behavior. Over the age-range studied here this item does not correlate with the questions for overall degree of difficulty (32 and 33) nor does it load on the factor difficult. This is noteworthy because in the works of Thomas/Chess, Carey and others, irregular biological functioning forms part of the category of temperamental profiles named "difficult". This is an illustration of Bates' critique on the way these profiles were given such names. Instead he wants to reserve the category label "difficult" to those clusters of behavior which have an empirically proven relation with what (groups of) parents themselves see as "difficult" or "easy". Therefore, he included his item 32, to let the (average) parent "empirically define" what is to be understood by a difficult (or easy) child.

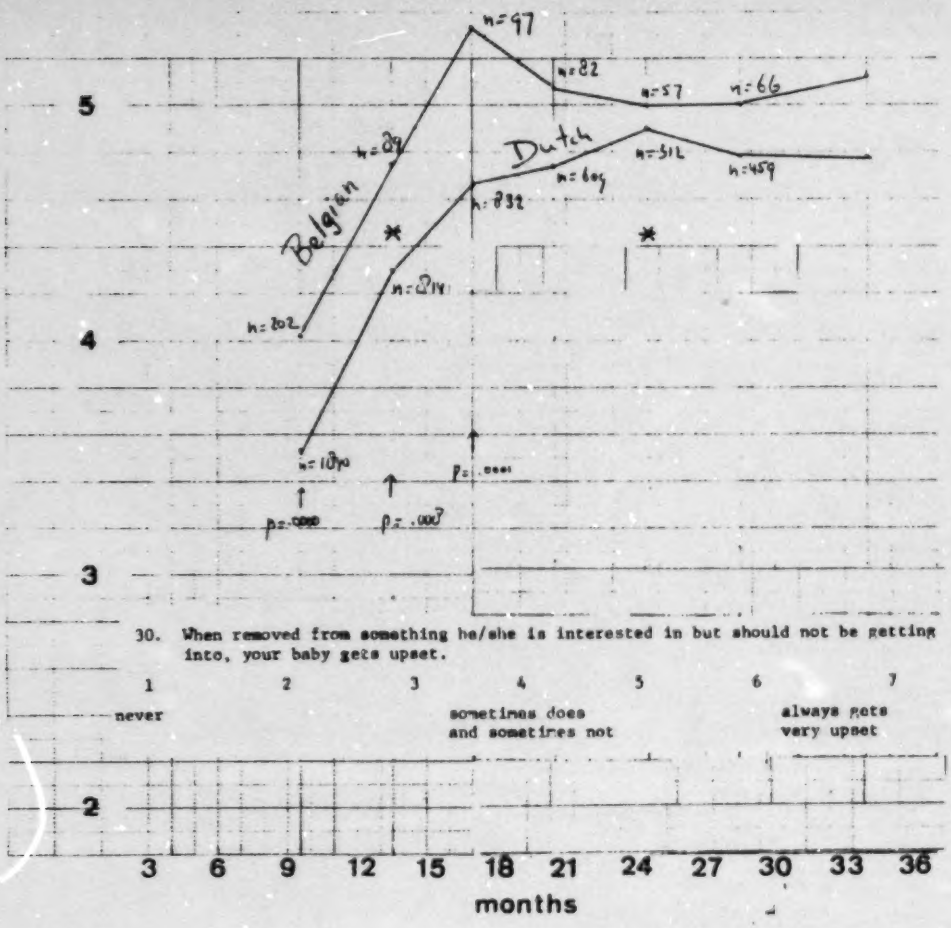
Note: The things said above about item 3 are also true for the other ICQ-questions measuring regularity in eating, and, to a somewhat lesser degree for both questions on regularity in sleeping.


5
5. How many times per day, on the average, does your baby get fussy and irritable-- for either short or long periods of time?
1 never
2 1-2 times per day
3 3-4 times per day
4 5-6 times per day
5 7-9 times per day
6 10-14 times per day
7 more than 15
4
3
2
Belgian
Dutch
3 6 9 12 15 18 21 24 27 30 33 36
months
* = Bloomington, Ind.

5. The only item in this questionnaire with explicit meaning given to all 7 scale values.
The picture for the Dutch/Belgian group is similar as in first graph however. Also, this question has a very specific behavioral content, is not global and does not ask for a general impression the child makes on the parent . Such questions can be expected to be less influenced by subjective general opinions on child. Therefore it is important to see that the same general tendency results as in first graph, item 1, or in the graphs for the most subjective items (32 and 33) of the questionnaire. Also, factor analysis revealed for this item (5) a central and stable position in the first factor, at least for the first two years of life. Thus, the "easy" to "average" tendency for the mean ratings on questions clustering in a factor "difficultness" (or different factors, see pages 10 - 14) does not seem to be caused by and limited to molar, not behavior-specific questions.

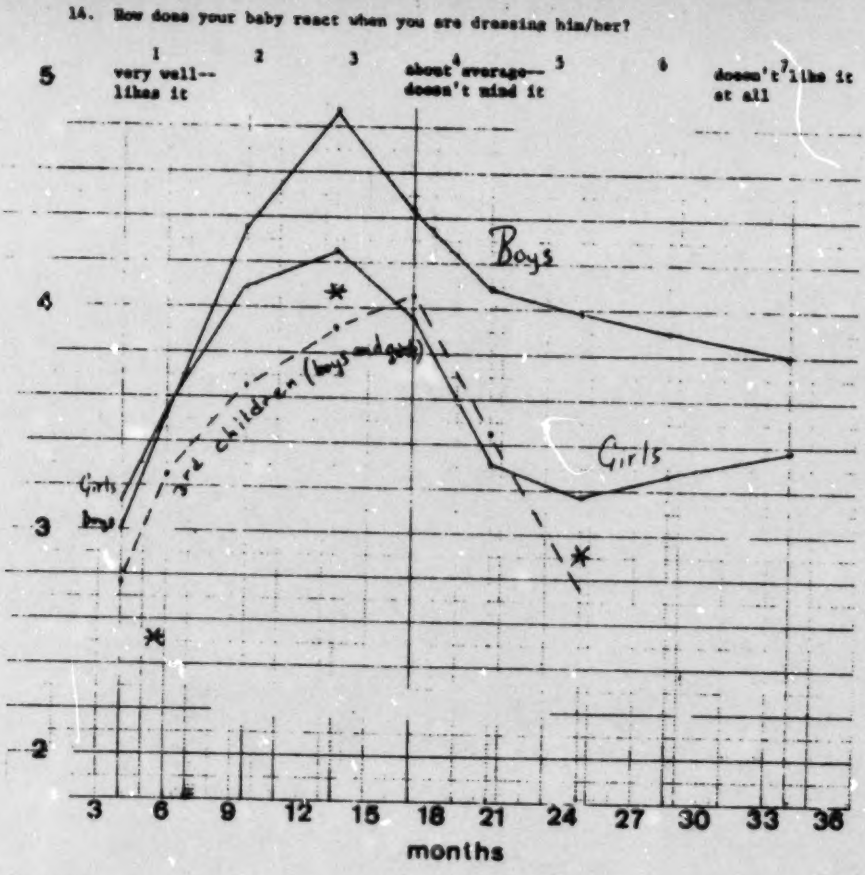

5
4
3
2
Belgian
Dutch
p<.005
25. How does your baby react to being confined (as in a carseat, infant seat, playpen, etc.)?
1 2 3 4 5 6 7
very well--likes it
minds a little or protests once in a while
doesn't like it at all
3 6 9 12 15 18 21 24 27 30 33 36
months
* = Bloomington, Ind

25. This item starts with means at the midpoint of the scale at age 3 - 4 months. Slowly means move towards scale value 5. Significant differences between the means. What do such differences mean? Does it mean that children react really differently in those three cultures or does it mean that parents react differently on such questions?
In general the Belgian mothers in this study give a less rosy picture of their children than do the Dutch.



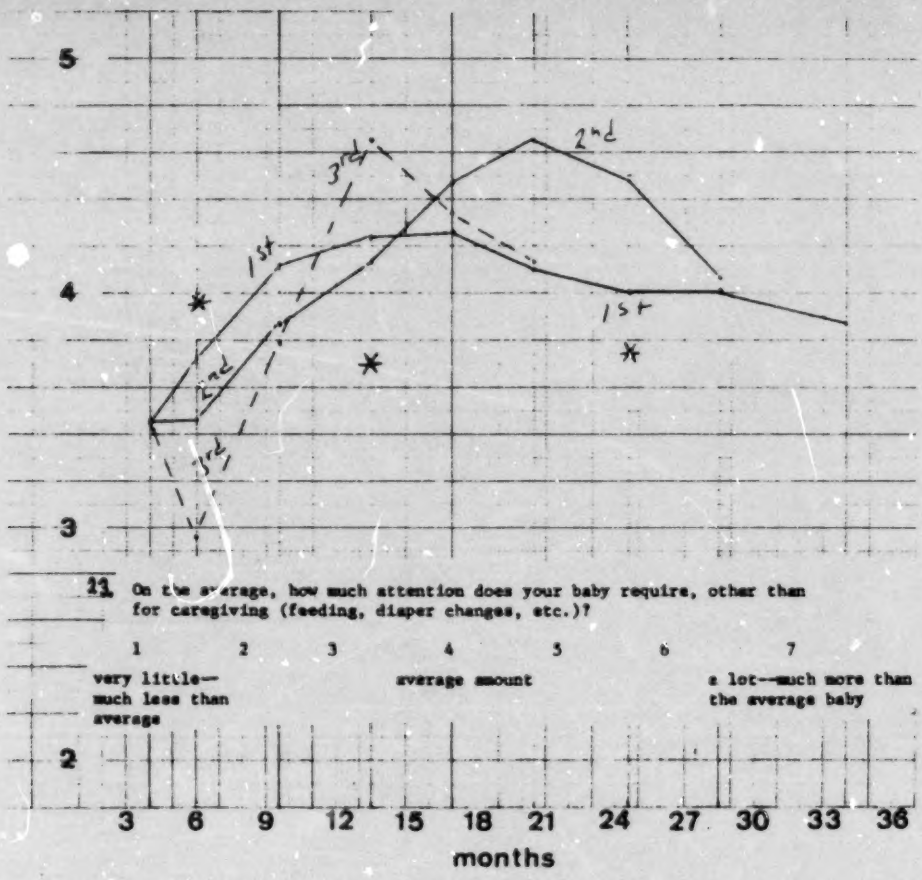
30. The last graph on which Belgian/Dutch differences are shown.
The steep rise between 9 and 18 months certainly has to do with growing possibilities a child has in this age-period to move itself to interesting places and its growing resentment to being removed from there. However, a ceiling seems te be reached in the second year and our hypothesis here is the same as with the next graph: growing understanding of verbal commands and learning by repetition softens the <u>average</u> reaction to parental interferences.

Note: this question is not posed in the ICQ for babies younger than 7 months; the first mean obtained was for age-group 7 - 11 months.



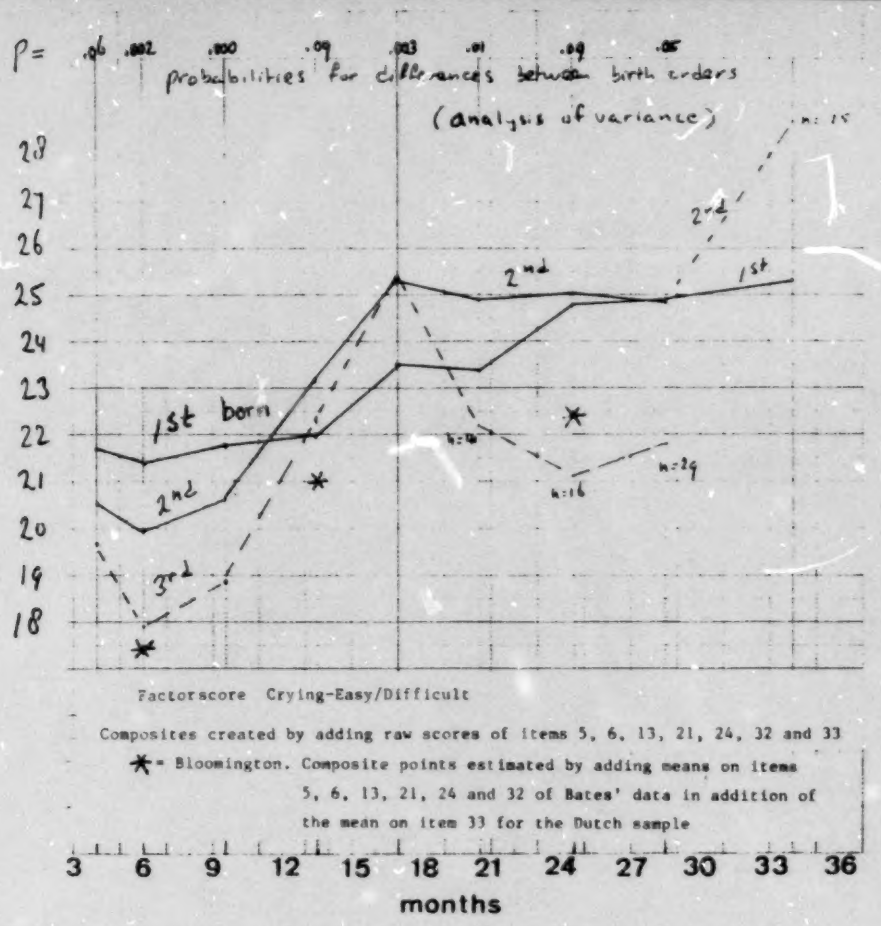
14. In this graph several tendencies are simultaneously shown.
First, there are the sex-differences, highly significant from 12 - 14 months onwards. In general boys were rated as somewhat less easy than girls. In the 15 - 18 months period 16 of the 33 items gave significant differences. At other ages between 6 and 12 differences were significant.
Next, there is the general shape of the curves, which very convincingly also appears in the Bloomington means. The change in average parental ratings must reflect a developmental and interactional reality.
Last, there is the dotted curve for children with two older siblings. More birth order differences are shown in next graphs.
A hypothetical explanation for the general curves could be:
1. The opposition against being dressed is mitigated by means of words used by mother (or other care-taker) which are progressively understood by the child. The child learns to accept the frustration.
2. The sex-difference is caused by a slightly slower progress in verbal interaction between mothers and sons.

We do not believe that the differences found in mean ratings for boys and girls can be explained by sex stereotyped perceptions or ratings of the mother. Because, if that were the case, why the differential effects of these stereotypes over age? Stereotyped perception would work as much with babies as with infants, and can not explain the lack of sex-differences before 7 - 11 months.



23. This question forms part of a factor called "persistence" but is also correlated with overall "difficultness".
The curves show a tendency for 2nd and 3rd born children to be rated easier than 1st borns around 6 months but less easy after 12 months. The steep dotted line for 3rd born children, after being rated as easiest, makes one look for an explanantion. Our best guess is that it has to do with mothers growing experience which makes that she really gives less attention to her 2nd and 3rd born child, when they are babies. But, when these children start moving around independently, climbing on things and imitating their elders, the situation changes. Mother suddenly feels the strain of dividing attention between two or three young moving children and "panics" for a while, before finding a balance in giving attention to and managing her couple or team of three.

It is true that in this hypothetical explanation we stress the subjective P-component (see page 2) more than the objective one. This is because we cannot believe that 2nd or 3rd born children, as babies and infants, really behave different from 1st borns, so as to require less attention before the 7 - 11 month period, more during the second year and the same thereafter.



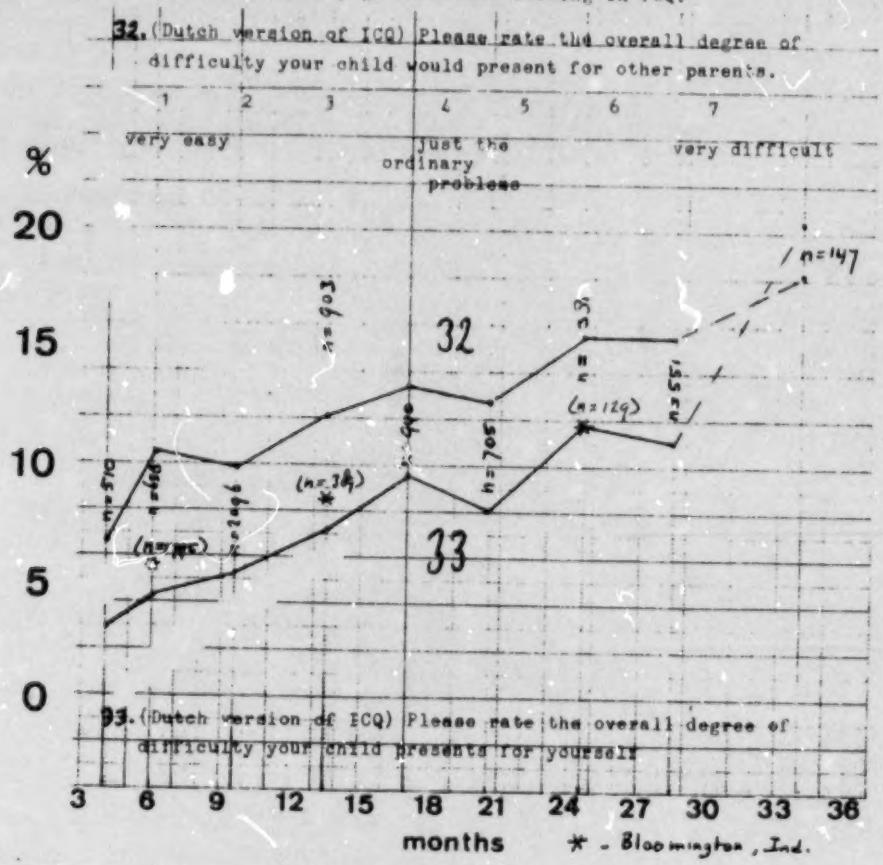
Factor score

In order to explore more thoroughly the birth order effects suggested by the answers given to individual items, the development of mean scores on a factor representing general dimension of easy-difficult for parents was traced.

What was hypothetically said in connection with the graph for item 23 can now be repeated with more confidence. The reliability and internal consistency for this factor is reasonable (see pages 6 - 9) and there are evidently changes in birth order effects on the means. What these changes in mean ratings really mean is still to be discovered.

Note in passing how closely the Bloomington means (not split up for birth order) resemble the Dutch/Belgian means. Is n't it astonishing that with all the differences between the two language versions of the scales, the way the respondents were assembled, on two different continents, the mean factor scores are so similar? This is not to say that the means don't differ at all. They do significantly so at 5 - 6 months and at 24 months. But why are the Bloomington means not up in the thirties or below fifteen? Because mothers in both cultures, on the average, perceive, experience and rate very similar their children who behave, on the average, similar over age.

Proportion of parents choosing scale values 5,6 or 7 on item 32 and 33.Item 32 is in Dutch ICQ named item 24 at 6 month and 32 at 18 and 24 month.See bottom of page for exact wording in ICQ.



Please rate the overall degree of difficulty your baby would present for the average mother.

1	2	3	4	5	6	7
super easy			ordinary, some problems			highly difficult to deal with

32./33. The last graph is of a different nature.
Here we compare the two questions asking for overall difficulty.
We computed the proportion of parents answering with a 5, 6 or 7 on these questions, thus on the difficult side of the midpoint of the scales indicating "just the ordinary problems".
These proportions rise from about 5 % at the lovely age of 3 - 4 months to between 10 and 15 % at the "terrible two's".
Again, note the surprising similarity between both cultures, even with rather different questions! Look also at the very regular differences between both questions in the Dutch version of the ICQ.
Item 33 is more directly worded asking for "difficulty for yourself". The question, thus phra sed, is supposed to meet more defensiveness and thus more socially acceptable answers, away from the difficult side of the scale. But apart from this "scaling" explanation there is also the sober truth that other people do not know your child as well as you do and would consequently run into trouble more often than you do.

The lines in the last strech of the age-period covered here are dotted because of a relatively small sample size. The suggested phenomena of a disappearing difference between both questions and a steep rise in numbers of children seen as more difficult in the second half of the third year need more study.

Pearson-correlations between rating on last question: "how difficult for yourself, in general?" with other ICQ questions.

age-group	1	2	3	4	5	6	7	8	9
range (months)	2-4	5-6	7-11	12-14	15-18	19-22	23-25	26-30	31-36
n (about)	404	577	671	734	409	285	294	244	60
1. how easy to soothe	53	33	37	33	(29)	41	42	44	44
2. consistent sleep routine	40	42			42			42	34
4. easy/difficult to know what bothering baby when cries			30						47
5. frequency of fuss/irritable	35	43	41	37	46		44	36	46
6. amount of fuss and cry in general	50	57	49	56	49	41	48	45	65
11. eventual adaption			33						
12. how easily upset	33	39	36	31	32			31	49
13. how vigorous cry					30		31		
14. reaction to being dressed								34	
15. activity							30		
16. smiles and happy	31								
17. mood in general	37	35	37		36	31		32	35
21. changeable mood	34	45	41	40	43	38	38	41	47
23. attention required other than for caregiving	(22)	(26)	(27)	30	44	40	42	38	55
24. play by itself when alone		38	41	31	42	32	38		37
25. reaction to being confined							35		
27. easy/difficult to take to places	31	42	38	43	41	44	38	42	54
28. plays with forbidden object	item not for this age-group				40		42		42
29. continues to go after told stop							42	42	43
30. upset when removed from forbidden thing					31			30	31
31. persistent attention seeking			36	32	34	36	32	33	32
32. overall easy/difficult for other parents	51	58	53	60	59	53	54	40	54

Only correlations > .30 are shown, except for item 1 and 23.
Items which have been omitted had no correlations > .30.

* n = much smaller due to printing error in questionnaire.

= change in item content

After inspecting the correlations between all items and item 33 (easiness - difficultness your child presents for yourself) we created a composite of 12 items:

1, 5, 6, 12, 17, 21, 23, 24, 27, 31, 32 and 33.

For this composite test-retest correlations were computed as in Table 1, page 6.

	Months		
	3 - 6	7 - 14	15 - 36
Easy/Difficult (12 items)	.61	.77	.83
	(n = 47)	(n = 137)	(n = 104)

It is clear that the extension of this cluster results in a slightly higher test-retest reliability.

The same is true for the internal consistency of the 12-item composite as opposed to the 7-item one.

Below are the standardized item α coefficients for the 9 age-groups. In the first two groups the composite consists of 11 items, since item 31 is not scored below 7 months.

2 - 4	.82	n = 541
5 - 6	.84	634
7 - 11	.85	1918
12 - 14	.84	820
15 - 18	.84	862
19 - 22	.82	631
23 - 25	.82	337
26 - 30	.83	472
31 - 36	.86	125

Upon being consulted about the usefulness of extending the difficultness-cluster as we did here, Bates wrote us:

" Concerning which items might ideally define difficultness, I would probably be a little more conservative than your list of correlates of item 33. I would include item 1. how hard to soothe, because it had a high loading not only in our original (Bates et al. 1979) factor I., but also in the 9/82 analysis of 5-6-month-olds with the larger N (you should have this table). It also had a smaller, but discriminating loading on Factor I. in your 12-14-month analysis. I do wonder what happened to it in your 5-6-month analysis, though. I am ambivalent about including item 12. how easily upset. It shows up in our 9/82 analysis, but had a less discriminating loading in our 1979 data, as well as in your 5-6-month analysis. I would not include items 17, 23, 27 and 31, despite their correlations with item 33, because I think they do not relate as well to the core of the difficultness construct, at least as it appears to me. A majority of the items correlate to a significant degree with the first factor, which is consistent with the way in which the questionnaire was originally formed. It is often an advantage to use a more tightly defined factor. However, I do not think that it would be psychometrically wrong to construct an expanded scale of perceived difficultness. The internal consistency might be high, and it may in fact turn out to have good correlations with external criteria. So, what I would probably do if I were in your shoes is to play around with both a narrowly- and a broadly-defined index, exploring the conceptual and empirical strengths and weaknesses of each."

Pearson correlations between composites on Dutch version of Bates' ICO (sample sizes between parentheses)

Months	Crying/Difficult-Easy * ↗ Persistence	↕ Adaptability	↘ Cuddly	Persistence ↗ Adaptability	↘ Cuddly	Adaptability ↕ Cuddly
2 - 4		.33	.08			.12
		(551)	(474)			(466)
5 - 6		.38	.01			.03
		(593)	(611)			(604)
7 - 11	.33	.36	.00	.02	.04	-.01
	(683)	(1880)	(1972)	(654)	(672)	(1868)
12 - 14	.31	.42	.00	.03	.06	.10
	(762)	(826)	(826)	(726)	(729)	(796)
15 - 18	.37	.34	-.04	-.09	.13	-.11
	(431)	(862)	(874)	(406)	(437)	(828)
19 - 23	.39	.25	.00	-.04	.08	-.12
	(300)	(658)	(657)	(293)	(294)	(638)
23 - 25	.40	.18	-.02	-.03	.20	-.12
	(312)	(355)	(350)	(304)	(300)	(340)
26 - 30	.42	.27	.13	-.12	.2[illegible]	.00
	(244)	(514)	(506)	(227)	(226)	(485)
31 - 36	.59	.36	.11	-.03	-.03	.15
	(61)	(138)	(132)	(60)	(57)	(129)

* seven items

ICQ Factor Analysis (5-6 month) for Dutch/Belgian sample(n = 577).

I. Crying/Easy-Difficult	I	II	III	IV	V
6. how much fuss and cry in general	.69	.17	.10	.24	
21. changeable mood	.64	-	.23	.15	
33. overall easy-diff. for self	.60	.17	.16	.35	-
5. times fussy-irritable per day	.53	.11	.12	.15	-
24. play by itself when alone	.50	-	.21	-	-.17
32. overall easy-diff. for other parents	.48	.34	-	.29	-
12. how easily upset	.45	.39	.11	.14	-
23. attention required other than caregiving	.45	-	-	-	-
13. how vigorous cry	.38	.15	-.10	.11	-
14. reaction to being dressed	.35	-	.11	.10	-
II. Adaptability					
10. response to new place	-	.71	-	-	-
9. response to new person	-	.61	.13	-	-
11. eventual adaption	.11	.61	.11	.15	-
27.* easy/diff. to take to places	.26	.58	-	-	-
20. response to disruptions	.27	.49	-	-	-
III. Mood					
17. mood in general	.35	.14	.58	-	-
16. smiles and happy	.15	.14	.57	-	-
IV. Predictable					
3. predictable when hungry	.13	-	-	.58	-
2. predictable asleep/awake	.30	-	-	.51	-
V. Cuddly					
19. wants to be picked up	.14	-	-	-	-.69
26. cuddle and snuggle when held	.10	-	-	-	-.49

Principal factors, varimax rotated. Initial eigenvalues = 6.10, 2.18, 1.72, 1.40, 1.24. First factor accounts for 21% of total variance, first 5 for 44%. Loadings below .10 not printed. Discriminating items underlined. Apart for factor I only discriminating items $\geq$ .30 are printed.

* question not included in original 6 month ICQ.

ICQ Factor Analysis (5 - 6 months) for Bloomington, Ind. (n = 702).

Factor names given by Kohnstamm for best comparison with dutch data.

I. Crying/Easy-Difficult	I	II	III	IV	V
32. overall easy/difficult for average mother	.64	.31	.26	.10	.21
6. how much fuss & cry in general	.64	.27	.29	.21	.15
1. how hard to soothe	.57	-	.14	-	.28
21.* changeable mood	.56	.22	.18	.12	-
12. how easily upset	.53	.27	.33	.15	.10
5. times fussy-irritable per day	.42	.28	.15	.14	.12
4. how hard to know what bothers	.39	-	.11	.13	.36
13. vigor of protest how vigorous cry	.35	.23	-	-	-
14. reaction to being dressed	.32	.14	-	-	.10
26. cuddle when held	.27	-	-	.24	-
II. Attention Demanding					
23. how much attention demanded	.35	.68	.11	-.11	-
19. wants to be held	-	.67	.11	-	-
24. does not play by self when left alone	.25	.66	.14	.11	.19
III. Adaptability					
10. respons to new place	-	-	.88	-	-
11. eventual adaption in general	.20	-	.55	.19	-
9. response to new person	-	-	.51	.16	-
20. response to disruptions	.28	-	.45	-	-
IV. Mood					
16.** smile and happy	.17	-	.20	.64	-
22. excitement when played with of talked to	-	-	.11	.52	-
17. mood in general	.24	.20	.18	.47	-
V. Predictable					
3. hard to predict hunger	.11	-	.10	.14	.63
2. hard to predict sleep	.18	.10	-	-	.52

apart from factor I only discriminating items with loadings $\geq .30$ are printed,

* items numbered 22 in Bates' ICQ 6 months, but 21 in versions for 13 en 24 months

** item numbered 23 in Bates' ICQ 6 months, but 22 in versions for 13 en 24 months.

Principal factors, varimax rotated with Kaiser normalization.
Initial eigenvalues 6.50, 2.11, 1.66, 1.38, 1.26. First factor accounts for 23 % of total variance, first 5 for 46 %.

ICQ Factor Analysis (13 month)

for Bloomington, Ind. (n=267)

Factor names by Bates

Variable		I	II	III	IV
I.	Fussy/Difficult/Demanding				
6.	amount of fuss and cry in general	.72	.10	.15	.21
32.	overall difficulty	.71	.16	.20	.15
23.	attention required other than caregiving	.60		.21	-.19
21.	changeable mood	.59	.14	.20	.25
12.	how easily upset	.52		.19	.32
17.	mood in general	.51	.15		.48
24.	does not play by self	.49	.26	.13	
5.	frequency of fuss/irritable	.47			.29
13.	how vigorous cry	.45		.34	
31.	persistent attention seeking	.42		.24	-.18
27.	difficulty in taking baby out	.42	.36	.14	.15
1.	how difficult to soothe	.36	.15	.13	.27
4.	know what is bothering	.34	.22		.20
19.	wants to be held	.33			-.15
2.	consistent sleep routine	.33			
3.	consistent eating routine	.29	.18		
II.	Unadaptable				
10.	response to new place		.74		.10
11.	eventual adaptation	.18	.69		.13
9.	response to new person		.58		
20.	response to disruption	.20	.51	.10	.12
8.	response to new foods	.10	.35		
III.	Persistent				
28.	plays with forbidden object			.76	
29.	continues to go after told stop			.73	.13
30.	upset when removed from forbidden thing	.30		.51	.11
15.	activity		-.13	.40	-.27
25.	reaction to being confined	.16	.11	.32	
14.	reaction to being dressed	.23	.18	.26	.14
IV.	Unsociable				
22.	excitement playing with people		.12		.57
18.	enjoys playing with you				.53
16.	smiles and happy sounds	.35	.10	-.15	.49
26.	cuddle and snuggle when held			.14	.46
7.	response to new toys		.31		.33

Note: Principal factor solution with iterations. Squared multiple correlations as initial communality estimates. Initial eigenvalues: 6.77, 2.79, 1.92, 1.84, 1.50, 1.43, 1.31, 1.19, 1.07, 0.94. Four factors orthogonally rotated with varimax. Solution selected for best interpretability and strongest loading pattern. Discriminating items underlined.

ICQ for 13 months as used by Bates

(For 24 months version 'infant' is changed to 'child')

On the following questions please circle the number that is most typical of your baby. "About average" means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

1	2	3	4	5	6	7
very easy			about average			difficult

2. How consistent is your baby in sticking to his/her sleeping routine?

1	2	3	4	5	6	7
very consistent; little or no variability			some variability			very inconsistent; highly variable

3. How consistent is your baby in sticking to his/her eating routine?

1	2	3	4	5	6	7
very consistent; little or no variability			some variability			very inconsistent; highly variable

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

1	2	3	4	5	6	7
very easy			about average			difficult

5. How many times per day, on the average, does your baby get fussy and irritable--for either short or long periods of time?

1	2	3	4	5	6	7
never	1-2 times per day	3-4 times per day	5-6 times per day	7-9 times per day	10-14 times per day	more than 15

6. How much does your baby cry and fuss in general?

1	2	3	4	5	6	7
very little much less than the average baby			average amount about as much as the average baby			a lot; much more than the average baby

7. How does your baby typically respond to new playthings?

1	2	3	4	5	6	7
always responds favorably			responds favorably about half the time, or is always neutral			always responds negatively or fearfully

8. How does your baby typically respond to new foods?

1	2	3	4	5	6	7
always responds favorably			responds favorably about half the time, or is always neutral			always responds negatively or fearfully

9. How does your baby typically respond to a new person?

1	2	3	4	5	6	7
always responds favorably			responds favorably about half the time, or is always neutral			always responds negatively or fearfully

10. How does your baby typically respond to being in a new place?

1	2	3	4	5	6	7
always responds favorably			responds favorably about half the time, or is always neutral			always responds negatively or fearfully

11. How well does your baby adapt to new experiences (such as in items 7-10) eventually?

1	2	3	4	5	6	7
very well, always likes it eventually			ends up liking it about half the time			almost always dislikes it in the end

12. How easily does your infant get upset?

1	2	3	4	5	6	7
very hard to upset--even by things that upset most babies			about average			very easily upset by things that wouldn't bother most babies

13. When your baby gets upset, how vigorously or loudly does he/she cry and fuss?

1	2	3	4	5	6	7
very mild intensity or loudness			moderate intensity or loudness			very loud or intense, really cuts loose

14. How does your baby react when you are dressing him/her?

1	2	3	4	5	6	7
very well--likes it			about average--doesn't mind it			doesn't like it at all

23. On the average, how much attention does your baby require, other than for caregiving (feeding, diaper changes, etc.)?

1	2	3	4	5	6	7
very little--much less than average			average amount			a lot--much more than the average baby

24. When left alone, your baby plays well by himself/herslef.

1	2	3	4	5	6	7
almost always			about half the time			almost never--won't play by self

25. How does your baby react to being confined (as in a carseat, infant seat, playpen, etc.)?

1	2	3	4	5	6	7
very well--likes it			minds a little or protests once in a while			doesn't like it at all

26. How much does your baby cuddle and snuggle when held?

1	2	3	4	5	6	7
a great deal--almost every time			average, sometimes does and sometimes does not			very little seldom cuddles

27. How easy or difficult is it to take your baby places?

1	2	3	4	5	6	7
easy; fun to take baby with me			okay baby may fuss but no real trouble			difficult; baby is usually disruptive

28. Does your baby persist in playing with objects when he/she is told to leave them alone?

1	2	3	4	5	6	7
rarely or never persists			sometimes does and sometimes not			almost always persists

29. Does your baby continue to go someplace even when told something like 'stop,' 'come here,' or 'no-no?'

1	2	3	4	5	6	7
rarely or never			sometimes does and sometimes not			almost always

30. When removed from something he/she is interested in but should not be getting into, your baby gets upset.

1	2	3	4	5	6	7
never			sometimes does and sometimes not			always gets very upset

15. How active is your baby in general?

1	2	3	4	5	6	7
very calm and quiet			average			very active and vigorous

16. How much does your baby smile and make happy sounds?

1	2	3	4	5	6	7
a great deal, much more than most infants			an average amount			very little, much less than most infants

17. What kind of mood is your baby generally in?

1	2	3	4	5	6	7
very happy and cheerful			neither serious nor cheerful			serious

18. How much does your baby enjoy playing with you?

1	2	3	4	5	6	7
a great deal, really loves it			about average			very little, doesn't like it very much

19. How much does your baby want to be held?

1	2	3	4	5	6	7
wants to be free most of the time			sometimes wants to be held; sometimes not			a great deal--wants to be held almost all the time

20. How does your baby respond to disruptions and changes in the everyday routine, such as when you go to church or a meeting, on trips, etc.?

1	2	3	4	5	6	7
very favorably; doesn't get upset			about average			very unfavorably; gets quite upset

21. How changeable is your baby's mood?

1	2	3	4	5	6	7
changes seldom, and changes slowly when he/she does change			about average			changes often and rapidly

22. How excited does your baby become when people play with or talk to him/her?

1	2	3	4	5	6	7
very excited			about average			not at all

31. How persistent is your baby in trying to get your attention when you are busy?

1	2	3	4	5	6	7
doesn't persist at all			will try, but will only mildly persist			very persistent- will do anything to get attention

32. Please rate the overall degree of difficulty your baby would present for the average mother.

1	2	3	4	5	6	7
super easy			ordinary, some problems			highly difficult to deal with